

PATENT APPLN. NO. 09/890,646  
RESPONSE UNDER 37 C.F.R. § 1.116

**PATENT  
FINAL**

**IN THE CLAIMS:**

1-34. (canceled)

35. (currently amended) A recombinant DNA comprising a polynucleotide of any one of claims ~~25 to 34~~ 47-54, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

36-38. (canceled)

39. (currently amended) A method for producing 2-hydroxyisoflavone synthase comprising culturing a host cell that contains a polynucleotide according to any one of claims 47 - 54 ~~encoding the amino acid sequence of SEQ ID NO:2.~~

40-46. (canceled)

47. (new) An isolated polynucleotide having a sequence that codes for the protein of SEQ ID NO:2, or a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants, or a complementary polynucleotide thereto.

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48. (new) The isolated polynucleotide of claim 47, which codes for SEQ ID NO:2, or a polynucleotide complementary thereto.

49. (new) The isolated polynucleotide of claim 47, having the having the sequence of nucleotides 144 - 1712 of SEQ ID NO:1, or a polynucleotide complementary thereto.

50. (new) The isolated polynucleotide having the sequence of SEQ ID NO:1, or a polynucleotide complementary thereto.

51. (new) The isolated polynucleotide of claim 47, which codes for the protein of SEQ ID NO:2, or a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants.

52. (new) The isolated polynucleotide of claim 48, which codes for SEQ ID NO:2.

53. (new) The polynucleotide of claim 49, having the having the sequence of nucleotides 144 - 1712 of SEQ ID NO:1.

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54. (new) The polynucleotide of claim 50, having the  
sequence of SEQ ID NO:1.